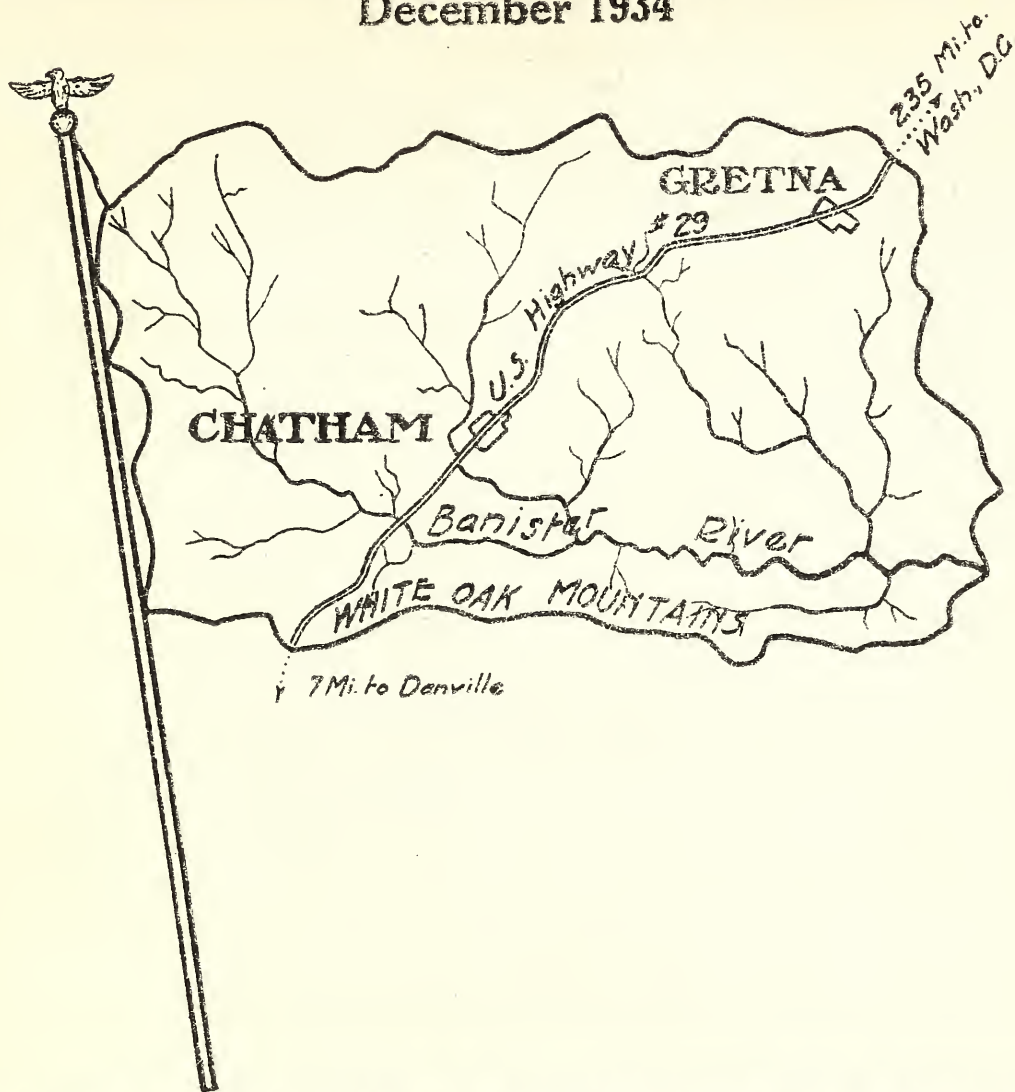


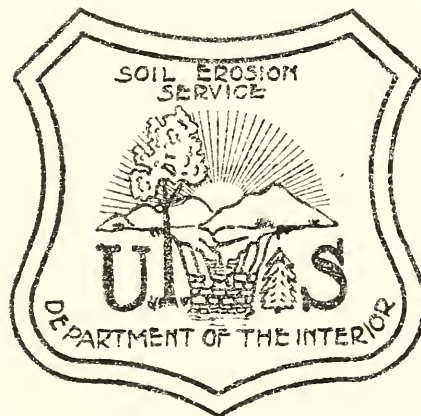
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Banister River Banner



VOLUME 1

CHATHAM, VIRGINIA

NUMBER 5.

MEMBERS OF THE BANISTER RIVER WATERSHED SOIL EROSION STAFF
PROJECT NO. 22 - CHATHAM, VA.

EXECUTIVE:

Dr. J. H. Stallings, Regional Director
P. F. Keil, Ass't. Regional Director
J. P. Crawford, Chief Clerk
B. D. Bennett, Clerk
Juanita M. Mitchell, Junior Clerk
Hallie W. Farson, Stenographer
Nilla B. Tredway, Stenographer
Helen F. Wooding, Stenographer

AGRONOMY:

T. L. Copley, Chief Agronomist
R. C. Harvey, Ass't. Agronomist

FORESTRY:

J. B. Pike, Jr., Chief Forester
O. W. Price, Junior Forester

FARM MANAGEMENT:

J. A. Smart, Acting Erosion Special't.
H. L. Dunton, Ass't. Erosion Special't.
J. L. Harrison, Agri. Aide (Apt. Pdg.)
A. M. Moore, Agri. Aide (Apt. Pdg.)

AGRICULTURAL ENGINEERING:

J. K. Alvis, Agricultural Engineer
T. H. Garrett, Ass't. Agri. Aide
W. G. Munn, Ass't. Agri. Engineer
E. H. Howard, Draftsman

SOILS DEPARTMENT:

F. F. Lickels, Soil Expert in Charge
A. J. Laur, Soil Expert
E. F. Goldston, Soil Expert
Alec Yedinak, Jr., Jr. Soil Expert

SES-ECW CAMP NO. 1 SUPERVISORY PERSONNEL

B. F. Dyer - Camp Superintendent	C. A. Thompson - Foreman
H. C. Mauer - Engineer	Wm. A. Towler - Foreman
F. P. Trent - Foreman	T. M. Jackson - Foreman
E. W. Mundie - Foreman	J. D. Swan - Foreman
A. H. Stephenson - Foreman	S. D. Owen - Blacksmith
Talitha C. Grubb - Clerk-Stenographer (Apt. Pdg.)	

ARMY PERSONNEL OF THE 378TH CO. CCC

Captain William H. Thomas	- Commanding Officer
1st. Lt. K. R. Monroe	- Mess Officer
1st. Lt. H. M. Bronk	- Camp Physician
1st. Lt. Robert Frew	- Administrative Officer

VIRGINIA EROSION HANDBOOK

SOIL EROSION CONTROL AND LAND-USE PROGRAM as being conducted by the Soil Erosion Service in cooperation with the landowners of the Banister River Watershed of Pittsylvania County is the subject of a 32-page handbook soon to be issued by the County Board of Supervisors.

ANSWERS TO PERTINENT QUESTIONS regarding the benefits to be had from the government in helping landowners to prevent the serious washing of their lands are contained in the publication, as well as detailed information pertaining to the scope of the work. Also complete directions for seeding and use of crops for erosion-control purposes are given.

THE HANDBOOK WAS PREPARED by W. E. Bowers, erosion extension specialist of the Soil Erosion Service staff.

COPIES ARE TO BE MAILED to interested landowners in Pittsylvania County. A limited number of additional copies may be had from the county agent or by writing to the Soil Erosion Service, Chatham, Va.

PREVENT SHEET EROSION

Sheet erosion is the most destructive agency the farmer has to contend with. The top soil, the cream of the farm, is continuously being worn away by the ravages of this demon.

According to some quantitative measurements made at the erosion stations, nature requires not less than 400 years to build an inch of topsoil. Under continuous corn cultivation it requires only seven years to remove one inch of it where the slope is about four feet in a hundred, and only one year to remove this same depth of surface material from land sloping a little more than eight feet in a hundred.

Since sheet erosion is caused by the rapid movement of water over the surface of the ground, methods of prevention to be effective must be aimed at reducing the velocity with which the water is permitted to move over the field. Obstructing its movement will reduce the amount of soil it removes and increase the volume of water entering the soil.

Any condition of the surface or surface covering that will retard the flow of water will in turn reduce the damage from erosion.

The porous condition of the soil resulting from plowing under organic matter, such as manure, stubble, crop residue and cover crops retards the flow of water and greatly increases the amount of water the soil will absorb. The growing of deep rooted crops, such as sweet clover, in the crop rotation will increase the absorptive power of the soil. A field planted to tobacco continuously lost 701 times as much soil as a grass pasture, 4.5 times as much as a field that was in a rotation of cotton, wheat and sweet clover, and 1650 times that of a forested area.

Plowing on the contour, growing strips of close growing crops between regular field crops and proper terracing will serve to retard the flow of water from the field. The combination of contour cropping between the strips of close growing crops is very effective in preventing erosion. Contour plowing saves about $3\frac{1}{2}$ times as much soil as rows running up and down the hill. Terracing is the most effective mechanical method of preventing erosion but is more effective when the above precautions are employed in connection with it.

Since a crop cover is important to protect soils against erosion; - plant the roughest land to timber - use more of the rougher land now in crops for pasture - introduce more leguminous crops into rotations - and practice strip farming on all long slopes.

If mankind cannot devise and enforce ways of dealing with earth which will preserve this source of life, we must look forward to the time when our kind, having wasted his greatest inheritance, will fade from the earth because of the ruin it has accomplished.

* * * * *

The following bulletins may be obtained from the Soil Erosion Office, Project #22, Chatham, Va.: Leaflet #85, "Strip Cropping To Prevent Erosion"; Farmers' Bulletin #1234, "Gullies, How to Control and Reclaim Them"; Farmers' Bulletin #1669, "Farm Terracing"; Farmers' Bulletin #1397, "Using Soil Binding Plants to Reclaim Gullies in the South".

SOILS DEPARTMENT

SOILS OF THE BANISTER RIVER WATERSHED

In the November issue of the Banister River Banner the erosion survey maps made by this Department were described. Some of the major factors used to distinguish one soil from another were also discussed. In this and following issues of the Banner we aim to give a more detailed description of the soils in this area and to list the crops best adapted for each soil. The information given in these descriptions is intended to help each farmer know more about his soil.

This month we are describing the first of the 18 soil series in the Banister River Watershed.

CECIL SERIES: The surface of the Cecil series is a gray sandy loam to brownish-red clay loam. The subsoil is red. The Cecil soils are derived from Granite, Gneiss and related rocks. Approximately 55% of the soils in this area fall in the Cecil group. There are three types of Cecil soils which are described below:

CECIL SANDY LOAM (#22)*: The surface or top soil is gray to grayish-brown sandy loam, 6 to 10 inches deep. This grades into a yellowish-red, sandy loam which extends to a depth of 10 to 14 inches. The subsoil is bright red, stiff brittle clay; containing some angular quartz and some mica flakes.

Crops listed in order of adaptability: -Corn, small grain, tobacco, forage crops, sorghum, truck and fruits. The Cecil Sandy Loam is well adapted to practically all crops grown in this area.

CECIL SANDY LOAM, MIXED PHASE (#23)*: This soil is the same as the one described above except that part of the sandy surface has been washed off, leaving red gall spots exposed.

Crops listed in order of adaptability: -Corn, small grain, forage crops, fruits and pastures.

CECIL CLAY LOAM (#24)*: This soil has a brownish-red to red top soil 4 to 6 inches deep which is underlain by the stiff, red clay subsoil typical of the other Cecil soils. This soil was at one time Cecil sandy loam with a gray sandy surface; erosion has removed all or nearly all the top soil leaving the brownish or red subsoil exposed.

Crops listed in order of adaptability: -Corn, small grain, alfalfa, mixed hay and pasture.

*Number in parenthesis represents the symbol used on the maps for the soil type.

TESTING SOILS FOR LIME AND FERTILIZER REQUIREMENTS

The Soils Department is equipped to test soils within the Watershed for lime and fertilizer requirements when samples are brought to our office.

Collecting samples: -In collecting soils for such test several samples (5 or more per acre) should be taken to a depth of six inches and mixed. After mixing these samples thoroughly, about one pint should be sent to our office.

SOIL EROSION DEPARTMENT

COOPERATIVE AGREEMENTS

Up to the present time 391 farmers, covering 50,675 acres in the Banister River Watershed, have signed Cooperative Agreements with the Soil Erosion Service. These farmers believe that it is to their advantage to cooperate with the Soil Erosion Service.

As the New Year approaches the progressive farmers are deciding on their cropping plans for the following year. This is a good time to secure the aid of men who can give you valuable information as to the different types of soil found on your farm, the crops which will do best in these soils, and the rotation best suited to your farm and family. Any plan that is suggested must meet with your approval before it is written into a Cooperative Agreement. It is not possible for you to understand what our program is unless you take the time to discuss it with us right out on your farm. Every field and every farm presents a different problem. You cannot lose anything by discussing your soil erosion problems with us and you will probably profit a great deal. If, after our men have looked over your farm, you do not wish to sign the Cooperative Agreement, you are under no obligation to do so.

If you have already come to the conclusion that you cannot cooperate with the Soil Erosion Service for any of several reasons, we would appreciate it if you would discuss these reasons with one of our men as it may be that you have been incorrectly informed. We do not recommend terraces on all fields nor for all farms. Neither do we recommend strip cropping nor reforestation on all farms. The rotation suited to one farm must be changed for another farm. The farming plan for your farm must be sufficiently practical to meet your every day needs and obtain a livelihood for your family. Some think the signing of a Cooperative Agreement would be a hindrance in securing loans or selling the farm. Certain loan companies are insistent that the farmers who borrow from them cooperate with the Soil Erosion Service. If a farmer sells his land the agreement is cancelled. But there is no doubt that the farmer who takes measures to keep his top soil from washing away will have a more valuable farm to sell if he ever wishes to do so. Again we say, talk your individual problems over with us rather than some one that may be misinformed.

We have contracted for large supplies of agricultural lime, fertilizer, seed and trees. We have the use of terracing outfits and the C. C. C. labor. Some or all of these you may need on your farm, but you cannot obtain any of them without signing a Cooperative Agreement.

Our request is very simple: DO NOT DECIDE WHETHER OR NOT YOU WILL COOPERATE WITH US UNTIL AFTER YOU HAVE DISCUSSED YOUR PROBLEMS WITH US. . . . and take immediate action by sending us an invitation to visit you.

* * * * *

Let us never forget that the cultivation of the earth is the most important labor of man. Unstable is the future of a country which has lost its taste for agriculture. If there is one lesson of history that is unmistakable, it is that national strength lies very near the soil.

. Daniel Webster.

AGRONOMY DEPARTMENT

FALL PLOWING:- Our cooperators have held up all fall seeding work and we hope are now preparing land which is to be seeded next spring. Much of this land must be fallowed and this should be done at the first opportunity. Fall and winter plowing has two advantages. First, it results in a better seed bed next spring since the soil becomes compact and harrowing is all that is required to put it in first class condition at seeding time. Second, it gets the job off hand before the spring rush of plowing for other crops. We expect cooperators to complete their seeding next spring on all farms on which the agreements were completed during the summer and early fall. Most of the seeding should also be completed on all farms worked this winter.

LIME:- Cooperators will arrange to promptly haul all lime from the cars when notified.

CROPPING PLANS:- During the bad weather this winter, when out door work cannot be done, it will be a good time to study the Cooperative Agreement and get thoroughly familiar with the map and cropping plans which are to be followed during the five year period. We plan to keep in close touch with our cooperators and give any assistance possible. We also hope our cooperators will feel free to come to the S.E.S. office at any time with their problems. The signing of the agreement is only the beginning and just as the proof of the pudding is in the eating, the real value of our program will be determined by the effectiveness with which it protects and improves the soils in the Banister River area.

FORESTRY DEPARTMENT

The winter months are particularly busy ones for the forestry department, for it is during this season that most of the reforestation of steep eroding land is accomplished. At the present two crews of men are engaged in planting forest seedlings on land which is not fit for agricultural use.

During the next four months 336,000 small trees will be planted. They will be concentrated on approximately 370 acres. During the fall of 1935 and spring of 1936 the foresters expect to plant 2,335,000 forest seedlings on cooperating farms. This large supply of stock will be grown by the U. S. Bureau of Plant Industry on their Erosion Control Nursery at Statesville, N.C.

RADIO SCHEDULE

W.B.T.M.-DAIVILLE, VA.-PIEDMONT BROADCASTING CO.
FARM BULLETIN HOUR-1:00-2:00 P. M.

November 27th, "Soil Erosion in the Banister River Watershed Area", by Dr. A. J. Baur, Soil Expert.

December 4th, "The Engineers Part in Soil Erosion Control", by J. K. Alvis, Agricultural Engineer.

December 11th, "Forestry and Soil Erosion Control", by Joseph B. Pike, Jr., Chief Forester.

December 18th, "The Use of Grasses and Legumes in Soil Erosion Control", by Richard C. Harvey, Assistant Agronomist.

SES-ECW CAMP NO. 1 NEWS

SPECIAL NOTICE TO OUR COOPERATORS - As a precautionary measure in safeguarding the enrollees of the 378th Company C.C.C. against accidents it is urgently requested by the Camp officials that no bird or rabbit hunting be permitted by the landowners on their farms while the Camp boys are working on the premises. Your hearty cooperation in this matter will be greatly appreciated.

* * *

From June 21st to November 25th, inclusive, the C.C.C. enrollees have constructed 3,318 soil check dams in terrace outlet channels and eroded gullies. In addition to this work, approximately 18,250 lineal yards of terrace outlet channels and diversion ditches have been constructed and 8,860 square yards of gully banks sloped. All of this work has benefited approximately 1,320 acres of farm land.

* * *

The Camp's recreational activities are confined largely to two sports-basketball and football. The basketball team won the last five games played, winning over Dan River High 53-23, Chatham High 42-19, Schoolfield YMCA 41-19, Climax High 40-18, and 18-10 respectively. Lally, Stephenson, Berie accounted for most of the points scored. Brown, Matty, Wilcosky and Lindsay played on the defensive in most of the games played.

Football has taken all interest as a leading sport, but due to the lack of football equipment, inter-barrack games are played only. Barrack #5 is heading the tournament at present.

Ping Pong, Checkers, and Cards are available for such boys as do not take part in the more strenuous sports of football, boxing and wrestling.

SOIL EROSION EDUCATION TOUR

In cooperation with Mr. P. F. Keil, Director, U. S. Soil Erosion Service, Banister River Project #22, and upon the suggestion of Mrs. F. C. Beverley, Principal and Social Study Professor of the Whitmell High School, a further step in Erosion Control Education was made.

Planned by Mr. J. A. Smart, supported by the authorities of our service, and assisted by Mr. J. E. Stone, County Agricultural Agent, the Soil Erosion Project in Chatham, Va., was host to over 100 students of the Whitmell High School on November 22, 1934, on an Erosion Control Tour.

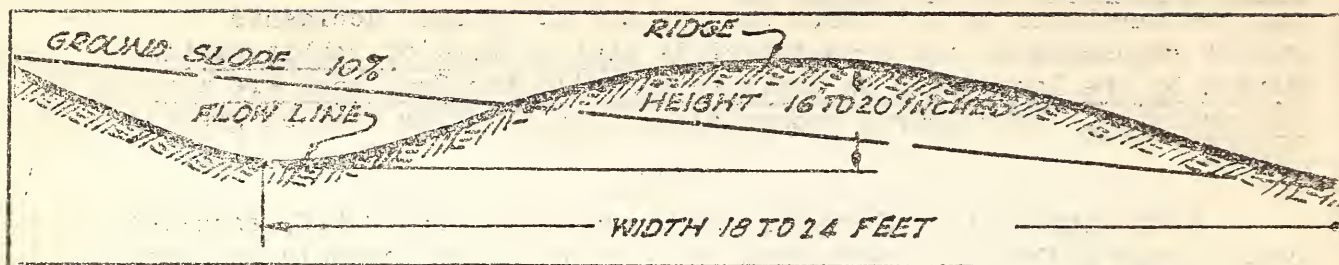
The students first visited the farm of Mr. S. J. Towler. Here they were instructed in detail concerning Agronomy, Soil, Forestry and Engineering. This instruction was given by representatives from their respective departments. Stops were also made at the Soil Erosion Camp, Transient Camp, and the farms of D. E. Nuckols, J. W. Bryant and A. L. Yeatts.

A highlight in this tour was a short speech by Mr. George W. Koiner, State Agricultural Commissioner from Richmond, Virginia.

Our appreciation to Mr. J. E. Stone, Agricultural County Agent, the different farm owners, and the local projects is manifold.

By arranging the children in groups, Mrs. Beverley facilitated immensely our instructing her students. We cannot overlook her splendid ability and cooperation.

THE MANGUM TERRACE



The Mangum fits the farmer's desire for a terrace that:

- (1) Causes the least of cultivated area,
- (2) Is easily crossed with machinery, and
- (3) Permits a gradual runoff of excess rainwater.

The channel of the Mangum terrace is wide and flat enough to slow up the flow

of water, while the ridge is sufficiently high to prevent breaking during heavy rains.

A Mangum terrace may appear high when first built but after it has been harrowed or plowed and subjected to a few heavy rains it settles considerably. A new terrace has to be built 18 inches high to obtain a final desired height of 12 to 14 inches.

The above sketch shows graphically how terraces are built. Their purpose is to slow up the speed of runoff water, and to lead it off of fields, thereby checking erosion.

Until November 24, 1934 the U. S. Soil Erosion Service Project No. 22, Chatham, Virginia has laid out, constructed and checked 150 miles of terraces, benefiting over 1500 acres of farm land, on eighty farms in the Banister River Watershed Area.

After the fields are cared for the water must be led into regular drainage channels. To do this ten miles of outlet channel has been constructed; 3200 check dams have been built to control erosion in these channels; 1200 in terrace outlets and 2000 in water channels.

The ultimate permanent success of any erosion control program depends on the effective vegetative cover on all water ways. The engineer's job on these channels is to prepare a good place for plant growth, and at the same time prevent erosion until the plants gain sufficient foothold to hold the soil without artificial assistance.

40,000 square yards of channel has been prepared and seeded to grasses. The planting of shrubs and trees is under way. With dams protecting these plantings through their youth, they should gain sufficient growth to afford adequate protection from erosion in a short time. It is the joint responsibility of the landowners and Soil Erosion Service to see to it that these plantings are protected from fire and livestock, so that they will furnish the necessary protection to save and consume the soil.

Crops may be and should be grown on terrace and in the channel of the terraces which are being constructed. In other words, no land is to be lost by using terraces, but of course, row crops should not be planted on a new terrace which has not had time to settle. Write U. S. Soil Erosion Service, Chatham, Va., for Bulletin, Farm Terracing, and other booklets.

A Deed to your land won't hold the soil, but a terrace with proper crop rotation will.

"Anything approximating permanent erosion control calls for a coordinated plan of attack, with vegetation as the main implement of combat."—H. H. Bennett, Director, S. E. S.